

NEW FORMS OF MOSAIC-TAILED RATS (*MELOMYS* AND *UROMYS*)
FROM HINCHINBROOK ISLAND, QUEENSLAND.

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Well known to travellers on the Queensland coast. Hinchinbrook Island is 20 miles long, from 5 to 9 miles wide, and separated from the mainland by a channel from a half to 3 miles broad. Having for some time previously received interesting notes and imperfect material indicating the presence of a variety of small mammals, one of us (A. S. Le Souef) visited the island in September, 1928, accompanied by a party of friends, with a view to collecting a representative series of specimens.

The rugged, mountainous, and heavily wooded nature of the island unfortunately restricted field work to the foreshores, and the comparative richness of the fauna is indicated by the fact that during the brief sojourn several bandicoots (*Isoodon*) and five species of rats were secured. It is interesting to note that, according to observations and statements of the residents, there is a striking absence of all arboreal or carnivorous marsupials, such as phalangers and native cats, though these are numerous on the mainland.

Three of the four species of *Murinae* are of the naked, scaly, or mosaic-tailed variety, and are, apparently, subspecifically distinct from the mainland forms. Though the differences in some respects may seem slight, they are sufficient to indicate fairly prolonged isolation from the mainland. The somewhat complex affinities of the forms dealt with in the following notes, coupled with the uncertainty as to the number of species occurring in Queensland, appear to render the mosaic-tailed rats from Hinchinbrook of unusual interest and to warrant the separate treatment accorded them.

MELOMYS LITTORALIS INSULAE subsp. nov.

Apparently similar in colour to the typical form of the mainland, and differing most noticeably in the character of the tail, which has larger scales and is shorter than the head and body, instead of being considerably longer, as indicated for the typical subspecies.

The general colour of the fur of the back, which is soft, fine, and close, is a brownish cinnamon resulting from the cinnamon band on the upper part of the fur and the pencilling of the sepia tips. On the under-surface the fur is pale grey basally, tipped with light pinkish cinnamon (Ridgway) which is warmest on the throat and chest. Ear conch dark sepia externally, sepia within. Pes sparsely covered with very pale pinkish cinnamon hairs. Manus with a narrow bar of sepia extending on to the outer metacarpals. The tail, which is medium brown above and yellowish below, is from 5-12 mm. shorter than the head and body in three adults preserved in alcohol, instead of being about 22 mm. longer, as measured in the holotype skin of the typical form; the scales differ in being somewhat larger, averaging 13-14, as opposed to 18-19, rings to a centimetre.

Skull dimensions differ but slightly, and in the absence of any description of the skull, or specimens of the typical form, it is not clear if definite differences exist.

Dimensions (holotype in alcohol): Head and body, 128; tail, 112; hind-foot, 25.5; ear length, 14.3; breadth flattened, 13 mm.

Skull: Greatest length, 30.2; condylo-incisive length, 27.8; zygomatic breadth, 15.4; nasals, 10.7; interorbital breadth, 4.3; palatilar length, 13.4; breadth of brain-case, 13; palatal foramina, 5; upper molar series, 5.9.

Habitat: Hinchinbrook Island, near Cardwell, north coast of Queensland.

Holotype: Adult male, registered Aust. Mus., No. M. 4382. Other specimens are female allotype and six paratypes.

In his description of the typical form, Lonnberg (1) refers to the possibility of it being a dwarfed littoral race of *M. cervinipes*, and that it differed very plainly in being much smaller and slenderer in every respect, thus resembling the group of small *Melomys* forms described by Thomas at various times. Examination of the series of *M. littoralis insulae* from Hinchinbrook Island, and comparison of their external and cranial dimensions with those of the typical form and *M. cervinipes* from Queensland, leave no apparent doubt that *littoralis* is a distinct form allied to the small *M. australis* of Cape York and *murinus* of Murray Island, rather than to the larger *cervinipes* or *banfieldi*. It differs from the equally small *australis* and *murinus* in having a longer tooth-row and nasals; from the former it also differs in lacking the variable line of white along the middle of the belly, and lacks, correspondingly, the white undersurface of *murinus*.

The specimens were only taken adjacent to some high grass, known as "blady grass," about 3-4 ft. high, in which they built nests fairly well up amongst the stems; the nests were circular, about 5 in. in diameter, and of similar size to a blue wren's nest.

MELOMYS CERVINIPES PALLIDUS, *subsp. nov.*

An insular race which is very closely allied to *M. c. eboreus* from Ravenshoe, North Queensland, altitude 2,900 ft., but apparently differing in more completely lacking the reddish coloration above, and in being more buffy beneath, while the tooth-row appears to be slightly shorter.

General colour of the fur above, which lacks the woolly texture of a New South Wales specimen of *cervinipes*, is composed of a short tipping of light pinkish cinnamon, interspersed with a pencilling of blackish-brown from the tips. The sides are buffy grey, the belly being washed with light pinkish cinnamon, most noticeable on the sides; there is a whitish strip down the centre of the chest and a similar area about the inguinal region. Ear a little smaller than in *eboreus*.

Skull dimensions similar to those of *eboreus*, agreeing in being smaller than those of the typical form; tooth-row a little smaller than in the allied subspecies.

Dimensions of the holotype in alcohol: Head and body, 136; tail, 144; hind foot, 28; ear, 17.5 mm.

Skull: Greatest length, 34; condylo-incisive length, 31.4; nasals, 11.3; interorbital breadth, 5.3; palatilar length, 15.2; breadth of brain-case, 14.2; palatal foramina, 6.2; upper molar series, 6.5.

Habitat: Hinchinbrook Island, near Cardwell, Queensland.

Holotype: Adult male, registered No. M.4379. Other specimens, allotype female, and one juvenile.

In the absence of topotypical material of *Melomys banfieldi*, described by de Vis from Dunk Island, Thomas (A.M.N.H., 1913) regarded that form as doubtfully distinct from *M. cervinipes*, but later (A.M.N.H., 1924) referred to "The rather smaller *M. banfieldi*, de Vis, with whitish under-surface, occurring commonly on the Cape York Peninsula." and remarked that, lacking material, "it is just possible that the Cape York animal may prove different." He also expressed the opinion that Lonnberg's *littoralis* would seem to be referable to *banfieldi*. Whether *banfieldi* occurs at Cape York or no, there is apparently no doubt that it represents a distinct, if closely allied, species from *cervinipes*; dimensions of two Dunk Island adults show them to possess relatively shorter ears and longer nasals than

(1) Lonnberg, Kungl. Sv. Vet. Akad. Handl., lii., 2, p. 5.

in *cervinipes*, while the coloration of the back appears to be generally much richer, being from ochraceous-tawny to sayal, pencilled with sepia to mummy-brown. The coloration and proportionately longer nasals markedly distinguish *banfieldi* from the adjacent insular form, *M. cervinipes pallidus*. The teeth of the two insular forms, however, agree in being smaller than the mainland subspecies of *cervinipes*. It has already been shown that the dimensions of *littoralis* distinguish it from *cervinipes*; comparison of its dimensions with specimens of *banfieldi*, quite apart from colour, also leave no doubt that Lonnberg's species is distinct from the latter.

UROMYS MACRUPUS EXILIS subsp. nov.

Differentiated from *U. sherrini* and allied to *U. macropus* by the character of the interorbital region and ridges on the cranium, as well as by the longer skull and hind feet. Distinguished from the typical Cape York form by the comparatively greater breadth immediately behind the rudimentary postorbital projections, and between the ridges on the parietals, as well as by the warmer yellowish-brown coloration, whiter under-surface, and somewhat shorter tail.

General colour of the back mainly bright yellowish-brown, composed of ochraceous-tawny on the shoulders and about clay colour on the rest of the back, intermingled with shining blue-black and blackish-brown hairs, which are thickest on the centre of the back and sides of the shoulders. Sides buffy-grey; snout, from between eyes to its tip, and on sides, of a drab buffy-grey; limbs buffy-grey; manus and pes white. Under-surface creamy white. Tail proportionately somewhat shorter than in the mainland forms.

The character of the orbito-parietal region definitely allies this form with *U. macropus*, while development laterally of the interorbital edges caused by the greater flattening and overhanging of the orbits, as well as the even greater width between the rudimentary postorbital projections and between the ridges of the parietals, separates this form subspecifically from the typical Cape York form of *macropus*. The upper profile of the skull is noticeably less bowed than in two Cape York specimens, in which there is a decided hump or convexity in the naso-frontal region, not present in the insular skull. Tooth-row slightly shorter than in the two mainland examples.

Dimensions of the holotype in alcohol: Head and body, 276; tail, 314; hind foot, 60; ear, 30 mm.

Skull: Condylar-incisive length, 68.5; zygomatic breadth, 36.3; nasals, 26.4; frontal, breadth at middle of orbital (not orbito-zygomatic) fossa, 11.6; breadth immediately behind rudimentary postorbital projections, 16.4; greatest breadth between ridges on parietals, 20.4; palatilar length, 36.5; palatal foramina, 8.5; upper molar series (worn), 12 mm.

Habitat: Hinchinbrook Island, near Cardwell, Queensland.

Holotype: Female adult, registered Aust. Mus., No. M.4378. A single specimen.

Comparison of the above dimensions of the orbito-parietal region with those of *U. sherrini* shows them to agree with the condition described by Thomas for *U. macropus*. The shortness of the sparse fur of the back also distinguishes this subspecies from *sherrini* from an altitude of 2,900 ft., while the warmer coloration and shorter tail separate it as a subspecies of the latter.

Regarding habits, Lonnberg has recorded the capture of a female from Milla-Milla, Northern Queensland, "from the nest in the top of a hollow, rotten tree." Collett wrote of *U. macropus* as being "not uncommon in hollow trees in the plains, where they are eaten by the natives." Thomas has suggested that the forms listed by both authors are probably

synonymous with his *sherrini*. In our opinion, this is probably so regarding the highland Milla-Milla specimen, but the specimen from the plains about Herbert Vale, recorded by Collett, by virtue of locality and greater length of the skull, appears reconcilable to *U. macropus*.

The Hinchinbrook form lives almost entirely on the coast, feeding mostly on the introduced cocoanuts which the residents have great difficulty in keeping from them; there were abundant signs of the powerful teeth having gnawed through the shells, while coconut was the only bait successfully used for them.

OCCURRENCE OF THE CRAB-EATING SEAL *LOBODON CARCINOPHAGA*
HOMBRON AND JACUINOT, IN NEW SOUTH WALES.

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Plate xi., fig. 2.

The Crab-eater, or, as it is sometimes called The White Antarctic Seal, is an inhabitant of the southern seas, round the Antarctic Continent. It has been noted on Graham Land and in the vicinity of the Bay of Whales, and is fairly numerous at times on the coast of Patagonia. Whilst the Sea Leopard (*Ogmorhinus leptonyx*) is not infrequently reported off our coasts during the winter months, the Crab-eater is very rare in our coastal seas, for, as far as can be traced, there are only two previous records of it having come ashore in Australia. This particular specimen came on to the Manly beach early in July, 1929, and was secured by the Taronga Park Trust. It lived only until the 23rd idem.

The general colour is silvery-cream, shining in the sunlight, mottled with dark grey on the sides of the neck, flanks and lower part of the body. The hind flippers are blackish-grey. Tail spatulate, about five by two inches. Eyes large and black.

Its movement on land is slow, and it can only progress by a series of jerks, there being no lifting power at all in the flippers. In the water, however, it is very much at home and very graceful. The call is not very loud, resembling that of a calf.

Naturalists in Antarctica have been puzzled as to the origin of scars on the bodies of seals. A leopard seal that came ashore last year had large curved marks on the body that seemed to have been made by the jaws of a shark. The specimen under review had two deep scars on the flank, as well as some punctured wounds, possibly caused by the canine teeth of another seal.

The teeth of this seal are of a very peculiar shape, being rather flat, with several lobes. It is supposed to feed on small crabs and shrimps, the teeth probably acting as sieves to allow water to escape while retaining the crustacea in the mouth.

The specimen was in an exhausted condition for several days and ignored fish, such as are eaten greedily by the captive furred seals. Later, when the fish were taken by it, the method of feeding was peculiar in that it removed the skin of the fish, ate the flesh and left the bones and head intact. It is, of course, not clear as to whether this method of eating fish was due to the exceptional conditions of captivity, or if fish would be eaten to any extent in the wild state; sheer hunger at the absence of usual diet may have influenced the animal to eat the fish. It is notable that the captive took no interest in dead shore crabs, indicating that small brit-like pelagic crustaceans, far removed from ordinary littoral forms, are its usual menu.

Admiral Evans, who had experience in the Antarctic, informed me that the stomachs of all specimens of this seal examined by him contained the small crustacea commonly called "Brit" (*Euphausia* spp.) by the whalers.